

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Atty. Ref.: **4662-9**

VEILLAT et al

Conf. No.: **5278**

Serial No. **10/530,435**

Group: **1794**

Filed: **September 28, 2005**

Examiner: **COLE**

For: **PROCESS FOR MAKING A MONOFILAMENT-LIKE PRODUCT**

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November 30, 2009

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPLICANTS' REBUTTAL BRIEF

Sir:

This Rebuttal Brief is being submitted pursuant to 37 CFR §41.71 and is directed to points of argument raised in the Examiner's Answer dated September 30, 2009.

By way of background, evidence is of record by way of the Declaration Under 37 CFR §1.132 of Christian H.P. Dirks ("Dirks Declaration") which *inter alia* demonstrate that improved abrasion resistance does in fact ensue for the monofilament-like fibers of the invention claimed in the subject '435 application as compared to the applied reference to Cook '597. Moreover, the Dirks Declaration makes it abundantly clear that such improved abrasion resistance effects of the monofilament-like fibers according to the invention claimed in the subject '435 application are surprising. Thus, the Dirks Declaration notes that:

"[D]uring abrasion resisting testing, the borders of the fused precursor filaments are expected to be the point of origin for fiber breakage. Staple fibers have of course more 'borders'

between one another as compared to continuous fibers.
Therefore, even a skilled person in this art would expect that
*the abrasion resistance of monofilament-like fibers made
from precursor staple fibers would be worse than
monofilament-like fibers made from precursor continuous
fibers.*"¹

With respect to this point of argument, the Examiner in her Answer asserts:

"[T]here is nothing in the [Dirks] Declaration which
establishes that the presence of borders in a fused precursor
filament would be expected to be the point of breakage. The
staple yarns which are made up of multiple staple length
fibers which are spun together when subjected to the
abrasion test set forth in the specification...might be
expected to have an improved resistance to breakage during
this test since it has multiple shorter fibers going in different
directions rather than few continuous fibers all extending in a
direction perpendicular to the abrading wheel."

The Examiner's statement of course amounts to nothing more than Examiner speculation that is not based on any facts.² This alone is manifestly erroneous as Courts have uniformly condemned such an approach.³

Not only does the Examiner's statement defy evidence presented by a person highly skilled in this art, it also defies common sense. In this regard, the Board can take

¹ Dirks Declaration at paragraph 4 on page 2, emphasis added.

² Of course, if the statement is based on facts within the Examiner's personal knowledge, then she is asked to supply an appropriate affidavit as required by Rule 104(d)(2).

³ See, *In re Katzaschmann*, 146 USPQ 66 (CCPA 1965).

official notice of the fact that a continuous filament yarn will be stronger than a staple yarn of the same fiber type. This fact seems to be without question to those of skill in the textile arts since when stress is applied to a component, that component will fail at the point least able to sustain that force (i.e., the “weak link” theory).⁴ It is logical to conclude therefore that if continuous filament yarn is known in the art to be stronger than a staple fiber yarn, then it must also be expected to have greater abrasion resistance – i.e., since a continuous filament yarn would be expected not to fail at points of weakness (which points of weakness would be present in staple fibers by virtue of their relatively short lengths or “borders” as referenced in the Dirks Declaration).

The factual inquiries to be made under 35 USC §103 set forth in *Graham v. John Deere Co.*, 382 U.S. 1,148 USPO 456 (1966) (hereinafter “*Graham*”) can be summarized as follows.

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue,
3. Resolving the level of ordinary skill in the pertinent prior art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

The *Graham* decision of course has been extensively discussed in the more recent case *KSR Int’l. Co. v. Teleflex Inc. et al*, 550 U.S. 398 (2007) (hereinafter “*KSR*”). There the Court noted that:

⁴ See, <http://textile-technology.blogspot.com/2009/07/warp-knit-mosquito-net-fabrics.html> at page 5. (“...a continuous filament yarn will be stronger than a staple yarn of the same fiber type. The reason for this is a simply physics problem. When stress is applied to a component, that component will fail at the point least able to sustain that force: The ‘Weak Link’ Theory. Once failure occurs, the totality of the stress is now supported by the remaining structural elements of that component, each of which is now supporting a proportionally larger amount of stress.”)

“Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit.”⁵

After conducting a proper analysis of the prior art, applicants suggest that the inevitable conclusion to be reached is that the presently claimed invention is statutorily *unobvious*. In this regard, as noted above, the knowledge possessed by a person having ordinary (indeed greater than ordinary) skill in this art is that the abrasion resistance of monofilament-like fibers made from precursor *staple* fibers would be worse – not better -- than monofilament-like fibers made from precursor *continuous* fibers. Nothing to the contrary has been proffered by the Examiner to rebut this fact other than speculative musings.

As the applicants have stated before, yarns made of staple fibers are well known. Unknown until the present applicants' invention was that monofilament-like fibers could be made from precursor staple fibers having greater abrasion resistance as compared to the conventional monofilament fibers made from continuous precursor filaments. This result is indeed quite surprising for the reasons already advanced during prosecution to date.

⁵ *KSR* at 418 citing *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”).

What is required by an analysis under 35 USC §103(a) is thus more than merely substituting one aspect from one prior art reference and combining it with another. As the Supreme Court also observed in *KSR*:

“...a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.”⁶

Again, other than speculative musing, no factual basis has been proffered by the Examiner that would cause an ordinarily skilled person to look toward staple precursor filaments as a means to *increase* abrasion resistance of monofilament-like fibers. Applicants maintain that, when the prior art is analyzed properly according to the standards of *Graham* it must be concluded that the presently claimed invention is patentably *unobvious*. That is, the current record does not identify a reason that would have prompted a person of ordinary skill in the field relevant to the present invention to combine the elements in the manner claimed. Indeed, the record establishes that there are reasons **not** to combine the elements in the manner claimed. The only conclusion therefore that can be drawn in the absence of such reasoning is that the rejection based

⁶ *KSR* at 418-419, emphasis added.

on Cook in view of the WO '029 and JP '646 publications is based impermissibly on hindsight.⁷

KSR also elaborates on results obtained with the applied combination of elements: i.e. the combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.⁸ When a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious. Thus, citing *Sakraida and Anderson's-Black Rock*, it was observed that a "...court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions."⁹

In this respect it is noted that the use of *staple* precursor filaments for the monofilament-like fibers according to the presently claimed invention results in an improvement that goes far beyond the predictable use of these prior art elements according to their established functions. Specifically, as noted previously, staple precursor fibers would be recognized by those skilled in the art as imparting *less* strength and *less* abrasion resistance (i.e., due to the more numerous "borders" identified in the Dirks Declaration) as compared to a comparable monofilament-like fiber formed from *continuous* precursor filaments. Thus the elements of the present invention work together in an unexpected and fruitful manner which support the conclusion that the invention is most certainly *not* obvious.

⁷ The Court of Appeals, Federal Circuit regards hindsight as an insidious and powerful phenomenon and is a tempting, but forbidden zone in the inquiry of addressing the statutory obviousness standard. See, e.g., *Panduit Corp. v. Dennison Mfg. Co.*, 227 USPQ 337 (Fed. Cir. 1985) and *Loctite Corp. v. Ultraseal Ltd.*, 228 USPQ 90, 98 (Fed. Cir. 1985).

⁸ See, *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57 (1969) and *Sakraida v. AG Pro, Inc.*, 425 U.S. 273 (1976).

⁹ KSR at 418.

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Therefore, based on the analysis above, applicants suggest that the rejections under 35 USC §103(a) based on the publications of record are inappropriate and must be reversed.

Fee Authorization

No fee is believed to be required. However, should the Office deem otherwise, the Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140.

Respectfully submitted,

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